

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended). A method for describing adaptive mobile multimedia applications or presentations, whose playback behavior depends on a current quality of service (QoS) during playback, ~~the method being based on~~ in an XML-based document model that is interpreted by an entity playing back multimedia content, the ~~[[and]]~~ comprising:

describing, in the document, intrinsic adaptation possibilities of application or presentations, which run in a mobile network environment, in an Adaptation Module including a programming language structure required for describing the adaptation possibilities of said adaptive mobile applications;

playing back an initial continuous media item during the current QoS;

specifying, in the document, alternative media items to be reproduced when a change in the current QoS during playback prevents the initial continuous media from being played back, said alternative media items being specified with a choose element having a startmode attribute which specifies a playtime at which reproduction is started for a continuous media item of the alternative media items after an adaption to the change in the current QoS; and

after adaption to the change in the current QoS, playing back the continuous media item of the alternative media items according to the startmode attribute instead of the initial continuous media item.

2 (Canceled).

Claim 3 (Previously Presented). The method according to claim 1, comprising:

describing interaction parameters of the application or presentation in an Interactions Module including the programming language structure required for describing interaction possibilities used for said adaptive mobile applications.

Claim 4 (Previously Presented). The method according to claim 1, further comprising:
describing constraints of an adaptation process in a Constraints Module including the programming language structure required for describing constraints for said adaptive mobile application.

Claim 5 (Previously Presented). The method according to claim 1, further comprising:
changing the programming language structure of modules in an Events Module including the programming language structure required for describing event possibilities used in said mobile applications.

Claim 6 (Previously Presented). The method according to claim 1, further comprising:
describing an association between the Adaptation Module and a MediaItems Module, represented by a link.

Claim 7 (Previously Presented). The method according to claim 1, further comprising:
describing an association between the Adaptation Module and an Interactions Module, represented by a link.

Claim 8 (Previously Presented). The method as described in claim 1, wherein the programming language comprises:

at least one MediaItems Module serving as a description unit for the alternative media items within said multimedia applications,

at least one Layout Module which organizes said alternative media items into regions on the visual rendering surface of a mobile display device, and

the Adaptation Module controls a context-aware adaptation of distributed multimedia applications by referencing elements of the MediaItems Module.

Claim 9 (Previously Presented). The method according to claim 8, wherein the programming language further comprises:

at least one Constraints Module which allows adding additional constraints to adaptation description elements, and

at least one Events Module which allows for a reaction on changes of various resources encompassing user's physical environment, user's context, quality-of-service (QoS) conditions of the applied networks, and mobile device capabilities.

Claim 10 (Previously Presented). A method for operating a middleware framework supporting processing of an XML-based description of an adaptive mobile application or presentation according to claim 8, wherein said middleware framework allows each running mobile multimedia application to specify media each running mobile multimedia application wants to use and relationships between these media, calculates adaptation possibilities of mobile multimedia applications and controls an adaptation process.

Claim 11 (Previously Presented). The method according to claim 10, further comprising modifying a linking structure between the Adaptation Module and the

MediaItems Module when the current QoS has changed.

12 (Previously Presented). The method according to claim 10, further comprising modifying a linking structure between the MediaItems Module and the Layout Module when the current QoS has changed.

13 (Previously Presented). The method according to claims 10, further comprising modifying a linking structure between the Interactions Module and the Layout Module when the current QoS has changed.

Claim 14 (Previously Presented). The method according to claims 10, further comprising modifying at least one of a document linking structure and a document structure by user interactions.

Claim 15 (Previously Presented). The method according to claim 14, wherein the user interactions are described by an Interactions Module.

Claim 16 (Previously Presented). The method according to claim 10, further comprising:

dynamically binding media items to a specific region on a visual rendering surface of the mobile display device, said binding being initiated by changes of the current QoS.

Claim 17 (Previously Presented). The method according to claim 11, further comprising:

dynamically binding widgets to a specific region on a visual rendering surface of the mobile display device, said binding being initiated by changes of the current QoS.

Claim 18 (Previously Presented). The method according to claim 8, further comprising:

extending or newly specifying at least one attribute of at least one element of the Layout Module in order to adapt a visual component of a specific media item to dimension of those regions on the mobile display device which are intended for multimedia presentations by scaling a visual size of said specific media item or replacing the said specific media item.

Claim 19 (Previously Presented). The method according to claim 6, further comprising:

describing the alternative media items of the MediaItems Module used in the Adaptation Module by media-specific information encompassing bandwidth and size of the visual portion of a multimedia presentation, meta information encompassing a name, genre, and actor of the alternative media items or Universal Resource Identifiers (URIs).

Claim 20 (Canceled).

Claim 21 (Previously Presented). The method according to claim 1, further comprising continuously monitoring network conditions, and selecting one of the alternative media items when the current QoS changes.

Claim 22 (Previously Presented). The method according to claim 21, wherein the selecting includes using priority attributes of the alternative media items.

Claim 23 (Previously Presented). The method according to claim 22, further comprising using a Par Element of the Adaptation Module for defining a simple time grouping in which multiple elements must be played back at a same time.

Claim 24 (Previously Presented). The method according to claim 23, wherein the adaptation possibilities are calculated with a Boolean term expressed by a Disjunctive Normal Form (DNF) on a set of different media items, wherein the choose element is considered as an OR operator and a par element as an AND operator, from which one conjunction of the Disjunctive Normal Form (DNF), and the adaptation possibility, is selected, depending on the QoS, mobile device capabilities and user context.

Claims 25-26 (Canceled).

Claim 27 (Currently Amended). The method according to claim 1, wherein the startmode attribute can take one of the following values:

a restart value, which indicates that the media item should always start from the beginning,

a resume default value, which indicates that the media items should always start from the position it stopped,

a laststop value, which indicates that the media item should always start at the media time the last continuous media item contained in the same "~~choose~~" choose element stopped,

a playtime value, which indicates that the media item should always start at the time, which is the combined playtime of all media items contained in the "~~choose~~" choose element since the "~~choose~~" choose element is started, and

a contplaytime value, which indicates that the media item should always start at the time, which is the combined playtime of all continuous media items contained in the "~~choose~~" choose element since the "~~choose~~" choose element is started.

Claim 28 (Previously Presented). The method according to claim 27, wherein the Adaptation Module supplies the choose element with an onremove attribute specifying what happens after a continuous media item is played back.

Claim 29 (Previously Presented). The method according to claim 28, wherein the Adaptation Module provides the choose element with an evaluation attribute which specifies if a content model of an element choose is evaluated once at start-up time, repeatedly in a specific time period or continuously while playing back the multimedia presentation.

Claim 30 (Previously Presented). The method according to claim 28, wherein the Adaptation Module provides the choose element with an empty attribute which supports a functionality that a set of media appropriate for the current QoS can be empty.

Claim 31 (Previously Presented). The method according to claim 30, further comprising evaluating an associated priority of an adaptation possibility by sorting all children of a par element according to their priority, merging configurations of a first two child elements by an AND operator in such a way that priority of resulting configurations

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includes a priority of a higher prioritized child appended with a priority of a lower-prioritized child, and repeatedly merging a result with all other children of the par element.